ABSTRACT OF THE DISCLOSURE

PROCESS FOR DETERMINING THE RESISTIVITY OF A FORMATION
THROUGH WHICH A WELL EQUIPPED WITH A CASING PASSES

Process for determining the resistivity (Rt) of a
formation (9) surrounding a well (10) equipped with a
casing (11) consisting of several casing segments
(11.i, 11.s) with an overlapping part (1), and cement
5   (3) in the overlapping part (1),

in which a current is injected into the casing
(11) to cause a leakage current (Ifor) into a area (8)
of the formation (9) offset from the overlapping part
(1), the leakage current (Ifor) in the measurement area
10   (8) is determined and is used to deduce the measured
resistivity (Rm) of the formation,

a current is injected into the casing (11) to
cause a current leakage (Icem) in the cement (3) of the
overlapping part (1), the leakage current (Icem) in the
15   cement (3) in the overlapping part (1) is determined,
and is used to deduce the measured resistivity (Rcem)
of the cement (3),

the measured resistivity (Rm) of the formation (9)
is corrected using a factor to take account of the
20   measured resistivity (Rcem) of the cement (3) to obtain
the resistivity (Rt) of the formation (9).

Application particularly to oil exploration.

Figures 2A, 2B.

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